

## CLAIMS

- 1     1.     A method of monitoring a filter for absorbing paint particles produced  
2     during spray painting with a spray gun in a paint spray booth coupled to an  
3     exhaust pump, said method comprising the steps of:  
4         installing a filter between the booth and exhaust pump;  
5         determining the initial pressure drop across a filter prior to use of the  
6     spray booth;  
7         determining the maximum allowable pressure drop for the filter prior to  
8     the requirement that spraying activities must be terminated by adding the initial  
9     pressure drop of the filter to the maximum allowable increase in pressure drop  
10    across the filter before the of spraying activities must be terminated;  
11         providing a warning when a first portion of the maximum allowable  
12    pressure drop is reached; and  
13         preventing the use of the spray gun when a second portion, greater  
14    than the first portion, of the maximum allowable pressure drop is reached.
  
- 1     2.     The method as set forth in claim 1 wherein the spray gun is  
2     pneumatically powered by pressurized air via a line having a solenoid valve  
3     mounted therein for controlling the airflow there through coupled to the spray  
4     gun, said step preventing the use of the spray gun when a second portion,  
5     greater than the first portion, of the maximum allowable pressure drop is  
6     reached includes the step of actuating the solenoid valve to the closed  
7     position cutting off airflow to the spray gun.
  
- 1     3.     The method as set forth in claim 2 wherein the pressure drop is  
2     measured by means of first and second pressure sensors positioned on either  
3     side of the filter.

1 4. The method as set forth in claim 3 wherein the first portion is 80 percent  
2 of the maximum allowable pressure drop and the second portion is 90 percent  
3 of the allowable pressure drop.

1 5. The method as set forth in claim 4 wherein the pressure transducers  
2 are connected to a computer with a display terminal, the method including the  
3 step of monitoring the pressure drop across the filter on the display terminal.

1 6. The method as set forth in claim 5 including the step of sending an  
2 alarm signal to the computer and displaying the alarm signal on the display  
3 terminal.